

## REMARKS

### STATEMENT OF COMMON OWNERSHIP

The present application, Serial No. 09/925,397, and Provisional Patent Application No. 60/246,052 to Benitez-Jimenez et al. were, at the time the invention of Application Serial No. 09/925,397 was made, subject to an obligation of assignment to International Business Machines Corporation.

### RESPONSE TO REJECTIONS

Claims 20-39 are pending. The Examiner's reconsideration of the rejections is respectfully requested in view of the remarks.

Claims 20, 27 and 34 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ortega (*Supporting Ranked Boolean Similarity Queries in MARS*) in view of Benitez (*MediaNet: A Multimedia Information Network for Knowledge Representation*). The Examiner stated essentially that the combined teachings of Ortega and Benitez teach or suggest all the limitations of Claims 20, 27 and 34.

Claims 20 and 27 claim, *inter alia*, "translating the high-level concept into a low-level query by using stored concept constructs which are defined using features derived from a plurality of application domains." Claim 34 claims, *inter alia*, "a concept translation engine that receives a high-level concept describing data to be accessed, translates the high-level concept into a low-level query using a hierarchy of stored concept constructs which are defined by

features derived from a plurality of application domains and constraints among sibling elements in the hierarchy.”

Referring to the Benitez reference, the Statement of Common Ownership (see above) is believed to overcome the present rejection - Benitez is not believed to be prior art under 35 U.S.C. §103(a) as it includes only subject matter which is subject to an obligation of assignment to International Business Machines Corporation as evidenced by the Provisional Patent Application No. 60/246,052 to Benitez-Jimenez and the subsequent assignment filed in connection with Patent 7,146,349 (claiming the benefit of Benitez-Jimenez).

Consider that 35 USC 103(c)(1) states that “Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability.” 35 USC 103(c)(1) states that if the subject matter is subject to an obligation of assignment to the common assignee, then it shall not preclude patentability. Thus, even though the Examiner has chosen to base the rejection on the Benitez paper rather than the provisional patent application to Benitez-Jimenez, the subject matter of that paper is clearly subject to an obligation of assignment to the common assignee of the present application. While 35 USC seemly does not have a provision for directly addressing the present circumstance (wherein subject matter of a non-patent reference is non-the-less subject to the obligation of assignment by virtue of a provisional patent application including the same), it is apparent that the obligation of assignment is the critical question here - and the subject matter relied on in the rejection was in fact, at the time of the filing of the present application, subject to an obligation of assignment to the common assignee of the present application.

More particularly, the rejection relies on FIG. 4, section 4.1, page 7 and section 4.2, page 9 of Benitez to reject Claims 20 and 27. The cited portions of Benitez appear in FIG. 4, and at sections 7.1 and 7.2, pages 14-17 of the provisional patent.

For at least the foregoing reasons, Benitez is not believed to be prior art under 35 U.S.C. §103(a). Reconsideration of the rejection is respectfully requested.

Even assuming, arguendo, that Benitez is prior art for purposes of the above rejection, the combined teachings of Ortega and Benitez fail to teach or suggest all the limitations of Claims 20 and 27, nor Claim 34.

Referring to Claims 20 and 27; Ortega teaches a method for retrieval of multimedia objects using a Boolean retrieval model (see Abstract and page 4, line 1-2). Ortega does not teach or suggest “translating the high-level concept into a low-level query by using stored concept constructs which are defined using features derived from a plurality of application domains” as claimed in Claims 20 and 27. Ortega, as described in the instant application at page 20, lines 8-10, does not work with any constraints but simply provides Boolean conjunction and disjunction (see section 1.2, pages 3-5). That is, nowhere does Ortega teach or suggest stored concept constructs, as claimed in Claims 20 and 27. Therefore, Ortega fails to teach or suggest all the limitations of Claims 20 and 27.

Benitez teaches a content-based retrieval system using existing text annotations (see section 4.1, first paragraph). Benitez does not teach or suggest “translating the high-level concept into a low-level query by using stored concept constructs which are defined using features derived from a plurality of application domains” as claimed in Claims 20 and 27. Benitez teaches concepts in section 1.3. Benitez does not teach or suggest concept constructs. For example, at most Benitez teaches relationships between concepts consisting of antonymy,

hypernymy/hyponymy, meronymy/holonymy, entailment, and troponym. These relationships are not analogous to a construct, for example, see FIG 3, wherein the example of a ball and net is a construct which may be translated into a score. Nowhere does Benitez teach or suggest a concept construct, much less a translation using a concept construct (Benitez translation of text queries into visual data (see section 4.2, first paragraph) is from low-level text data to high-level image data). Therefore, Benitez fails to cure the deficiencies of Ortega.

Referring to Claim 34; Claim 34 has been amended to further prosecution of the application (without conceding that Benitez is prior art for purposes of a 103 rejection).

Ortega teaches a query tree which supports weighting and leaf node evaluation (sections 4.2 and 4.3, pages 11-12). Ortega does not teach or suggest “a concept translation engine that receives a high-level concept describing data to be accessed, translates the high-level concept into a low-level query using a hierarchy of stored concept constructs which are defined by features derived from a plurality of application domains and constraints among sibling elements in the hierarchy.” The tree of Ortega is strictly of a top-down arrangement and does not include constraints among siblings in the tree. Therefore, Ortega fails to teach or suggest all the limitations of Claim 34.

Benitez teaches a content-based retrieval system using existing text annotations (see section 4.1, first paragraph). Benitez teaches relationships among concepts (see Table 1, page 4). Benitez does not teach or suggest “a concept translation engine that receives a high-level concept describing data to be accessed, translates the high-level concept into a low-level query using a hierarchy of stored concept constructs which are defined using by features derived from a plurality of application domains and constraints among sibling elements in the hierarchy” as claim in Claim 34. The relationships of Benitez are semantic. The semantic relationships are

descriptive of a relationship, e.g., sky has-similar-color-to sea (page 4, first full paragraph). The semantic relationships Benitez are not constraints, essentially as claimed. Therefore Benitez fails to cure the deficiencies of Ortega.

The combined teachings of Ortega and Benitez teach a method for retrieval of multimedia objects using a Boolean retrieval using text annotations. The combined teachings of Ortega and Benitez fail to teach or suggest “translating the high-level concept into a low-level query by using stored concept constructs which are defined using features derived from a plurality of application domains” as claimed in Claims 20 and 27, nor “a concept translation engine that receives a high-level concept describing data to be accessed, translates the high-level concept into a low-level query using a hierarchy of stored concept constructs which are defined using by features derived from a plurality of application domains and constraints among sibling elements in the hierarchy” as claimed in Claim 34. Reconsideration of the rejection is respectfully requested.

Claims 21-26, 28-33 and 35-39 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ortega in view of Benitez and further in view of Netsey (*CAMEL: Concept Annotated Image Libraries*). The Examiner stated essentially that the combined teachings of Ortega, Benitez and Netsey teach or suggest all the limitations of Claims 21-26, 28-33 and 35-39.

Claims 21-26 depend from Claim 20. Claims 28-33 depend from Claim 27. Claims 35-39 depend from Claim 34. The dependent claims are believed to be allowable for at least the reasons given for the respective independent claims.

At least Claims 25, 32 are believed to be allowable for additional reasons.

Claims 25 and 32 claim, “hierarchical fuzzy graph data tree-structure comprising: nodes that correspond to child-concepts and a subset of the features; aggregation edges that correspond to parent-child relationships; and association edges between siblings that correspond to inter-sibling constraints.”

Here, the rejection relies on Ortega to support the allegation that “association edges that correspond to inter-sibling constraints” are taught or suggested.

Ortega teaches a query tree which supports weighting and leaf node evaluation (sections 4.2 and 4.3, pages 11-12). Upon review of Ortega, no teaching or suggestion of “association edges between siblings that correspond to inter-sibling constraints” has been found. Ortega teaches only a top-down tree structure. The tree of Ortega does not include edges between siblings, much less “association edges between siblings that correspond to inter-sibling constraints” as claimed in Claims 25 and 32.

As described above, Benitez is not believed to be prior art.

Netsev teaches a method for content-based image searching (see Abstract). Netsev fails to teach or suggest “association edges between siblings that correspond to inter-sibling constraints” as claimed in Claims 25 and 32. Netsev associates semantic with a concept. Netsev teaches an association between concepts. Therefore, Netsev fails to cure the deficiencies of Ortega.

The combined teachings of Ortega and Netsev teach a query tree populated with concepts. The combined teachings of Ortega and Netsev fail to teach or suggest “association edges between siblings that correspond to inter-sibling constraints” as claimed in Claims 25 and 32.

Reconsideration of the rejection is respectfully requested.

For the forgoing reasons, the application, including Claims 20-39, is believed to be in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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